

alerts. Precision was measured using Positive Predictive Value (PPV), defined as the probability of detected article to have public health relevance, where relevance was determined by EI experts (human filter) who evaluated 13,679 English articles scanned within 24 hours. EU national public health experts supported sources and interface revision.

Results: Alternative search strategies successfully reduced false positives without reducing sensitivity (PPV from 15% to 30%). Best refinement of search strategies requires using fewer keywords (diseases basic definitions), adjusting their weights with an extensive use of negative values and using epidemiological terms in the keywords combinations. New alerts have been set up for English and translation to other EU languages is ongoing with the support of public health experts. Expansion of the sources and restructuring of the interface are underway based on EU Member States feedback.

Conclusion: Results indicate that optimization of search strategies and revision of sources with the support of national public health experts can help MedSys reaching its potential. Plans for 2010 include extension of the analysis to all diseases and languages and capacity building within the EU to encourage knowledge and use of the revised system. ECDC plans to create customized versions for EU Member States (country editions) and, on request, special versions for mass gathering surveillance.

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57.014

Changing trend of measles and rubella in Nepal: Is it time to introduce rubella immunization?

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Background: Measles and rubella are serious public health problems in many developing countries, though the incidence is significantly reduced in developed countries. Measles is under national immunization activity in Nepal while there is no such program for rubella. The lack of information on the burden of rubella is one of the obstacles for such initiatives.

Methods: The present study was conducted from January 2003 through December 2007 under national measles surveillance program. Blood specimens from measles like cases (based on case definition) during any outbreak throughout the country were collected, serum separated, transported to National Measles Referral Laboratory and tested for detection of anti-measles IgM by ELISA technique. Measles negative specimens were further tested for anti-rubella IgM to analyze the trend.

Results: Of the total cases, 43.65%(805/1844) and 42.95%(424/987) were found to be positive for measles and rubella respectively. Distribution of measles cases was observed as 82.7%(158/191), 72.6%(600/827), 6.4%(19/295), 2.8%(6/214) and 6.9%(22/317) in the year 2003, 2004,

50.75%(105/207) and 31.5%(93/295) in the year 2003, 2004, 2005, 2006 and 2007 respectively. We found that the number of measles cases significantly decreased ($P < 0.001$) with the increasing rubella cases ($P < 0.0001$) till 2005 and rubella remained at high burden level in the following years as well. In the recent years, most of the clinical measles cases were turned out to be rubella by results of laboratory investigation.

Conclusion: The incidence of measles has been rapidly reduced to a minimal after the measles immunization campaign (started at late 2004) and the routine immunization activity; however the emerging and increasing trend of rubella infection is a serious concern in Nepal. Continuation of measles immunization with the introduction of rubella immunization (both routine and supplementary) into national immunization strategy is the key measure to address this emerging problem.

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57.015

Influenza A activities in Shanghai, China during 2004 to 2009

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Background: Influenza has been a considerable public health problem in China as well as the global for it remains inadequately controlled. The knowledge about the epidemiological features is valuable for surveillance strategy, and molecular characteristics of viruses are useful for selection of variant strains.

Methods: The seasonal influenza was intensively monitored for the entire year in Shanghai area during 2004 to 2009. The clinical activities of the Outpatient Department of Minhang Centre Hospital were documented. The respiratory specimens from patients with influenzalike illness were collected and then identified by viral isolation and RT-PCR. The molecular characteristics of A/H1 and A/H3 viruses were also analyzed by sequencing and comparing the genetic diversity of HA segment respectively.

Results: Two separated high peaks of influenza appeared between February to March and between July to August, which were consistently correlated with the waves of ILI consultant proportion. Obviously succession of predominant influenza A viruses was observed while influenza B virus kept in a mild level: A/H3 predominated in 2004 and 2005, and then was subrogated by A/H1 in 2006. A/H3 increased again in 2007 till the winter of 2008, but A/H1 became dominated in the summer of 2008, and maintained dominating in 2009. All the isolates from both subtypes were similar to the strains of the same period in other countries and regions. Phylogenetic analysis of HA1 subunit revealed a linear trunk with succession of A/H3 isolates in different influenza seasons, and a multi-directional tree with cluster of A/H1 isolates in same influenza season.

Conclusion: The influenza activities in Shanghai revealed typical winter and summer seasonal feature. The predominant influenza A virus changed almost every season. The ever-changing spectrum of circulating influenza strains and their molecular characteristics support the need for seasonal surveillance of influenza viruses in Shanghai, for more precise information about the circulating strains may have implications for predicting the following season strains and selecting vaccine composition.

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Serological survey on influenza A (H1, H3, H5 and H9) antibodies in human populations in Shanghai, China in 2008 and 2009

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Background: Influenza A is a common respiratory disease in human, and A/H1 and A/H3 are currently co-circulating in the world. Meanwhile, influenza A/H5N1 virus has been spreading throughout South-East Asia and extended to Russia, Europe, Africa, the Indian subcontinent and the Middle East with associated human infections as well as influenza A/H9N2 virus has also caused repeated human infections in Asia since 1998. The periodic serological survey is useful to know the current seroprevalence of human A/H1 and A/H3 influenza antibodies in human population and to provide seroepidemiological information of avian H5, H9 influenza A virus infections in humans in Shanghai.

Methods: Yearly serological surveys were carried out in the occupational exposure personnel (OEP) and general population (GP) in Shanghai from 2008 to 2009. Human A/H1, A/H3 and avian A/H5, A/H9 influenza antibodies were detected using hemagglutination inhibition (HI) assays.

Results: The prevalences of human A/H1 influenza antibodies were 45.3% in 2008 and 64% in 2009 respectively while the prevalences of A/H3 influenza antibodies were 37.4% in 2008 and 40.7% in 2009 respectively. Obviously increasing of anti-H9 antibodies prevalence were observed: 36.3% in 2009, significant higher than 17.7% in 2008 in OEP; 3.3% in 2009, slightly higher than 2.6% in 2008 in GP. However, anti-H5 antibodies prevalence kept relatively stable: 4.0% in 2008 and 3.8% in 2009 in OEP as well as 0.3% in 2008 and 0.3 in 2009 in GP.

Conclusion: The seroprevalences of human H1 and H3 influenza antibodies were consistent with the activities of influenza virus in Shanghai recent years. There were potential human infections with influenza A/H5 and A/H9 in Shanghai, especially in the occupational exposure person-

nel, and meanwhile the risk of human influenza A/H9 virus infection was increased.

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A survey of lymphatic filariasis using ICT test in Attapeu Province, Lao PDR

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Background: Baseline observations suggest lymphatic filariasis (LF) is likely to be endemic in parts of Lao PDR. To date in Lao diagnosis has relied on the use of night blood film examination, which through its inconvenient testing time has limited the ability to conduct a regional LF prevalence survey. In Lao's southernmost province of Attapeu, two of the province's five districts have been identified as endemic (>1% prevalence) using night blood film examination. In this study we have conducted a regional survey of the remaining three districts in Attapeu province using immunochromatographic (ICT) filarial test kits. All work was performed in collaboration with the Centre for Malariology, Parasitology and Entomology, Ministry of Health, Lao PDR.

Methods: In August 2009 ICT filariasis tests were performed on 320 adults across the districts of Sanamxai, Samakkhixai and Sanxai in Attapeu province. Sample villages were evenly distributed across each district to ensure geographical spread. Minimum village sample size was 50 persons.

Results: Twenty-two ICT positive cases were identified; 3 in Sanxai ($n=157$ tested), 5 in Samakkhixai ($n=112$ tested) and 14 in Sanamxai ($n=51$ tested). The prevalence per district sample was 1.9% in Sanxai, 4.5% in Samakkhixai and 27.5% in Sanamxai. Night blood film examination was performed on 20 ICT positive cases; of these 2 showed microfilariae on thick blood film. There were no observed cases of elephantiasis or hydrocoele. Cases without contraindications were treated with DEC and/or Albendazole.

Conclusion: This is the first ICT filariasis test survey performed in Lao PDR. Given that each district showed >1% prevalence, this study's findings support a mass drug administration programme to eliminate filariasis in Attapeu province. The greater convenience and efficacy of the ICT test compared with night blood film examination confers a significant prospect of further LF surveys in Lao.

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